

REMARKS

Claims 1 and 14-26 are pending in the present application. Claims 24-26 are withdrawn from consideration by restriction. Further, the Office Action indicates that claims 15-23 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In addition, claims 17 through 19 have been amended to overcome the rejection under 35 U.S.C. § 112, second paragraph, set forth in the Office Action. More particularly, claim 17 has been amended to more clearly describe the subject matter for which patent protection is sought, and claims 18 and 19 have been amended to remove the modifier “the” from the phrase “the branches.”

Reexamination of the application and reconsideration of the rejections and objections are respectfully requested in view of the above amendments and the following remarks, which follow the order set forth in the Office Action.

Interview Summary

A telephone interview was conducted with Examiner Wilson and Examiner Hug on April 2, 2008. Proposed revisions to claims 17-19 were discussed and were favorably received by Examiners Wilson and Hug. Distinctions between the present application and the cited reference, USPN 5,779,757, were also discussed. No resolution was reached. Applicants appreciate the Examiners’ participation in the interview and thank them for their time.

Objections

Objection to Specification

The Office Action objected to the title of the application. Applicants have amended the title of the application as suggested by the Office Action.

Objection to Claim 1 Preamble

The Office Action objected to the preamble of claim 1 and provided a suggested preamble for the instant claim. Patentability of an apparatus claim depends on structural rather than functional distinction over prior art references. MPEP §2114; In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). Applicants respectfully submit that claim 1, as written, is structurally distinguishable over the prior art. Therefore,

the suggested preamble stating an intended use is not necessary and/or not relevant to the patentability of claim 1 over the cited art.

Rejection under 35 U.S.C. § 112, second paragraph

The Office Action rejected claims 17 through 19 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. As detailed above, Applicants have amended claims 17 through 19, and consider the amended claims to be allowable.

Rejection under 35 U.S.C. 103(a)

The Office Action rejected claims 1 and 14 under 35 U.S.C. 103(a) as being unpatentable over Sanghera, U.S. 5,779,757, ("Sanghera"). Applicants respectfully submit that independent claim 1 is not obvious in view of Sanghera because Sanghera fails to teach or suggest all of the required elements of claim 1.

Claim 1 recites a reaction chamber including a first container consisting essentially of a wall delimiting a volume which is substantially closed, apart from at least one first orifice formed in the wall, and a second container consisting essentially of a wall delimiting a volume which is substantially closed, apart from a second orifice connecting the second container to a first end of a conduit having an open second end. The first and second containers are integral. The second container and the conduit are integral, and the open second end is inside the first container. The chamber is capable of occupying two positions. Namely, a first position is described in which the first orifice is in an upper position relative to the other parts of the first container, and the second orifice is in a lower position relative to the other parts of the second container. A second position is described in which the first orifice is in a lower position relative to the other parts of the first container, and the second orifice is in an upper position relative to the other parts of the second container. In this second position, the open end of the conduit is aligned with and at a distance from the first orifice, and the configuration of the chamber is such that when the chamber is rotated in a first predetermined direction from the first position to the second position, any liquid contained in the second container remains in the second container and cannot flow through the conduit to the open end. However, when the chamber is rotated in a second predetermined direction, from the first position to the second position, any liquid contained in the second container is capable of flowing through the conduit and reaching the open end.

Sanghera discloses an apparatus including a reaction chamber having an open-ended tailpipe in fluid communication with the chamber at one end and a tube extending into the chamber at an opposite end. The tube is essentially closed except for small holes in the end of the tube that is extended into the chamber. The tailpipe and tube are connected to the chamber in an airtight fashion. After the batch composition is introduced to the chamber, the tailpipe is collapsed and sealed such that the tailpipe becomes a stub having a closed end. At this point, the apparatus is completely sealed off. The chamber with the sealed stub is placed into a furnace in order to effect a reaction.

To establish a *prima facie* case of obviousness, first, there must be some suggestion or motivation, either in the references themselves or in the knowledge in the art, to modify the reference or to combine reference teachings; second, there must be a reasonable expectation of success and third, all claim limitations must be considered. See MPEP § 2143. Applicants respectfully submit that the Office Action has not considered every limitation as required by the third criterion above.

Specifically, the Office Action has failed to consider the limitation that the open second end of the conduit must be inside the first container. It is significant that the open second end of the conduit is inside the first container because this configuration enables melted core glass disposed in the second container to be poured into an empty central space in the cooled cladding glass that is disposed along the wall of the tube of the first container thereby forming a preform for a double index optical fiber, i.e., a preform having two glasses with different refractive indices. See Specification page 9, line 36 – page 10, line 9. If the open second end of the conduit was not inside the first container, the reaction chamber would not have the ability to create a preform containing two glasses with differing refractive indices.

With regard to Sanghera, the tailpipe of Sanghera is never disposed inside the furnace; therefore, the open second end of the tailpipe is never inside the furnace. In fact, the tailpipe is collapsed and sealed leaving a stub before being placed in the furnace. In order for the claimed method of Sanghera to be practiced, the tailpipe must be collapsed and sealed prior to being introduced into the furnace. More specifically, in order for the glass melt to be distilled as described, the tailpipe must be collapsed and sealed prior to being introduced into the furnace. Sanghera column 5, lines 49-65. Therefore, one of ordinary skill in the art reviewing Sanghera would not find it obvious to modify Sanghera by placing the reaction chamber in the furnace with the end of the tailpipe open. This proposed modification to

Sanghera would render the invention thereof unsatisfactory for its intended purpose. Accordingly, Applicants respectfully submit that the Office Action has not considered the limitation that the open second end of the conduit is inside the first container as required by MPEP § 2143. For at least this reason, the Office Action fails to establish a prima facie case of obviousness.

Further, Applicants submit that the Office Action has failed to consider the limitation that a second orifice connects the second container to a first end of the conduit. With regard to the specific explanation in the Office Action in connection with this element, Applicants submit that the explanation is somewhat confusing. The Office Action refers to the second orifice as 10' and a conduit as 20, however, Sanghera refers to the assembly after the tailpipe 20 has been collapsed and sealed as 10'. Therefore, it is unclear how the reference numeral 10' could be said to refer to a second orifice. Further, the tailpipe 20 is never a part of the assembly 10', but rather the tailpipe 20 is collapsed to form a stub 20' thereby forming the assembly 10'. Accordingly, it seems inaccurate to describe the tailpipe 20 in conjunction with the assembly 10'. With further regard to this element, Applicants submit that no other explanations of the components of Sanghera or embodiments of Sanghera disclose this element of claim 1. As such, Applicants submit that the Office Action has not considered the limitation that a second orifice connects the second container to a first end of the conduit as required by MPEP § 2143. For at least this reason, the Office Action fails to establish a prima facie case of obviousness.

Lastly, Applicants submit that the Office Action has failed to consider the limitation that the first container and the second container are integral. The meaning of the term integral as used in the instant application is a concept related to the definition of integral as a complete unit. As may be clearly seen in FIGS. 1 and 2, the first container completely encompasses the second container, thereby making the first container and the second container a complete unit having constituent components that are always used collectively as one unit. In contrast, Sanghera discloses an assembly having a reaction chamber that is placed within a furnace to effect a reaction and then is removed from the furnace once the reaction is complete. The furnace that is used with the reaction chamber of Sanghera may be used with any other reaction chamber. Further, the reaction chamber of Sanghera may be used with any other furnace. Accordingly, the reaction chamber and furnace of Sanghera do not form a complete unit. They are not constituent components that are always used collectively as one unit, and therefore, they are not integral. As such, Applicants submit that

the Office Action has failed to consider the limitation that the first container and the second container are integral as required by MPEP § 2143. For at least this reason, the Office Action fails to establish a prima facie case of obviousness.

For the foregoing reasons, Applicants submit that independent claim 1 is allowable. In addition, Applicants submit that claim 14 is allowable as depending from allowable independent claim 1. A Notice to this effect is respectfully requested. If any questions remain, the Examiner is invited to contact the undersigned at the number given below.

Respectfully submitted,

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